

U.S. Serial No. 10/731,777
Amendment Dated February 17, 2005
Response To Office Action Dated October 21, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the above-identified application:

Listing of Claims

1. (Currently Amended) A wing for a micro air vehicle, comprising:
at least one layer of a resilient, flexible material having a camber forming a concave surface facing downward, the material selected for improving wind gust rejection due to adaptive washout as a result of the material flexibly decambering;
wherein the wing is bendable from a steady state position in a first direction such that tips of the wing may be bent toward the concave surface but not substantially in a second direction that is generally opposite to the first direction; and
wherein the wing is capable of returning to the steady state position by releasing the tips of the wing.

2. (Original) The wing for a micro air vehicle of claim 1, wherein the at least one layer of a resilient material comprises a leading edge formed from a first material that is different from the material forming a remainder of the at least one layer.

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3. (Original) The wing for a micro air vehicle of claim 2, wherein the leading edge is formed from an aramid fiber/epoxy mixture and at least a portion of the remainder of the at least one layer is formed from a mixture of carbon fiber and epoxy.

4. (Currently Amended) The wing for a micro air vehicle of claim ~~1~~ 2, wherein the ~~at least one layer of a resilient material~~ leading edge is formed from pre-impregnated carbon/epoxy fiber cloth.

5. (Currently Amended) The wing for a micro air vehicle of claim ~~1~~ 2, wherein the ~~at least one layer of a resilient material~~ leading edge is formed from an aramid fiber/epoxy mixture.

6. (Currently Amended) The wing for a micro air vehicle of claim 1, wherein the at least one layer of a resilient material is formed from materials selected from the group consisting of fiber reinforced laminates, ~~sheet metal~~, foam materials, and plastics.

7-8. (Canceled)

9. (Original) The wing for a micro air vehicle of claim 1, wherein a wing span of the wing is between about three inches and about twenty four inches.

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10. (Original) The wing for a micro air vehicle of claim 1, wherein the wing is capable of being bent around a central body of a micro air vehicle so that the micro air vehicle including the wing may fit within a tube having a diameter of about three inches.

11. (Original) The wing for a micro air vehicle of claim 1, further comprising a riser section forming a concave portion on an upper surface of the wing proximate to a trailing edge of the wing.

12. (Currently Amended) A micro air vehicle, comprising:
a central body;
a wing attached to the central body, wherein the wing comprises:

at least one layer of a resilient, flexible material having a camber forming a concave surface facing downward, the material selected for improving wind gust rejection due to adaptive washout as a result of the material flexibly decambering;

wherein the wing is bendable from a steady state position in a first direction such that tips of the wing may be bent toward the concave surface but not substantially in a second direction that is generally opposite to the first direction; and

wherein the wing is capable of returning to the steady state position by releasing the tips of the wing.

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13. (Original) The micro air vehicle of claim 12, wherein the at least one layer of a resilient material comprises a leading edge formed from a first material that is different from the material forming a remainder of the at least one layer.

14. (Original) The micro air vehicle of claim 13, wherein the leading edge is formed from an aramid fiber/epoxy mixture and at least a portion of the remainder of the at least one layer is formed from a mixture of carbon fiber and epoxy.

15. (Currently Amended) The micro air vehicle of claim ~~13~~ 12, wherein the ~~at least one layer of a resilient material~~ leading edge is formed from pre-impregnated carbon/epoxy fiber cloth.

16. (Currently Amended) The micro air vehicle of claim 12, wherein the ~~at least one layer of a resilient material~~ leading edge is formed from an aramid fiber/epoxy mixture.

17. (Currently Amended) The micro air vehicle of claim 12, wherein the at least one layer of a resilient material is formed from materials selected from the group consisting of fiber reinforced laminates, ~~sheet metal~~, foam materials, and plastics.

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18 -19. (Canceled)

20. (Original) The micro air vehicle of claim 12, wherein a wing span of the wing is between about three inches and about twenty four inches.

21. (Original) The micro air vehicle of claim 12, wherein the wing is capable of being bent around a central body of a micro air vehicle so that the micro air vehicle including the wing may fit within a tube having a diameter of about three inches.

22. (Original) The micro air vehicle of claim 12, further comprising a riser section forming a concave portion on an upper surface of the wing proximate to a trailing edge of the wing.

23. (Original) The micro air vehicle of claim 12, further comprising a tail coupled to the central body that is generally orthogonal to the wing.

24. (Original) The micro air vehicle of claim 12, further comprising a tail coupled to the central body that is generally vertical to the wing.

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25-31. (Canceled)

32. (New) The wing for a micro air vehicle of claim 2, wherein the material forming a remainder of the at least one layer is formed from latex.

33. (New) The micro air vehicle of claim 13, wherein the material forming a remainder of the at least one layer is formed from latex.

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